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(71)Applicant : KOKUSAI ELECTRIC CO LTD

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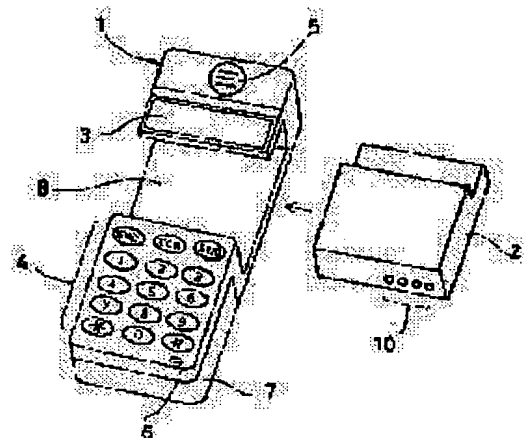
(72)Inventor : SHIMADA NOBUYASU

(54) PORTABLE TELEPHONE EQUIPMENT

(57)Abstract:

PURPOSE: To improve operability without damaging portability by attaching/detaching a transmission/reception part equipped with incoming call transmission to the main body of a portable telephone set where an operation part is installed.

CONSTITUTION: A transmission/reception part 2 can be fitted to the recessed part of a main body 1 of the portable telephone set by sliding from the side, and the upper part of the transmission/reception part 2 is formed stepwise so as not to interfere a display part 3. On the other hand, on a side face on the opposite side of the stepwise form of the transmission/reception part 2, a contact 10 is provided with a contact in the fitting state. Then, speaking is enabled in the state of fitting the transmission/reception part 2 to the main body 1 of the portable telephone set. When carrying, the transmission/reception part 2 is detached from the main body 1 of the portable telephone set, the main body 1 of the portable telephone set is housed in a bag, for example, or the like and only the transmission/reception part 2 is housed in a pocket or the like and carried. When a controller confirms call incoming, incoming call contents are inputted and stored in a memory, and a vibration generator is driven. Then, the vibration generator is vibrated and a user recognizes incoming call.



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CLAIMS

[Claim(s)]

[Claim 1] A cell phone unit characterized by enabling attachment and detachment of the transceiver section which possesses arrival-of-the-mail transfer at least on a main part of a portable telephone with which a control unit was prepared at least on said main part of a portable telephone.

[Claim 2] A cell phone unit of claim 1 whose arrival-of-the-mail means of communication is the tremulor.

[Claim 3] A cell phone unit of claim 1 which prepared a display in a main part of a portable telephone.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to a cell phone unit.

[0002]

[Description of the Prior Art] There was no limit of a location at recent years, and by the time portability was searched for further, the miniaturization was attained, and the cell phone unit did not almost have sense of incongruity although it was put into the pocket of clothes etc. and carried as the cell phone unit whose message is possible had spread and the convenience of a message improved, it became.

[0003]

[Problem(s) to be Solved by the Invention] Like, although the **** miniaturization is promoted in order [above-mentioned] to raise portability, if it is miniaturized in the conventional cell phone unit to the magnitude of the degree into which it is simply put in the pocket of clothes, key input switches, such as the telephone number, will also be small along with it, and operability will have been spoiled greatly.

[0004] This invention tends to raise operability in view of this actual condition, without spoiling portability.

[0005]

[Means for Solving the Problem] This invention is characterized by enabling attachment and detachment of the transceiver section which possesses arrival-of-the-mail transfer at least on a main part of a portable telephone with which a control unit was prepared at least on said main part of a portable telephone.

[0006]

[Function] At the time of pocket conveyance, the transceiver section is demounted from the main part of a portable telephone, the transceiver section is contained in the pocket of clothes etc., and when the main part of a portable telephone is contained and carried in a bag etc. and there is arrival of the mail, the transceiver section transmits arrival of the mail to a pocket person, and equips with and uses the transceiver section for the main part of a portable telephone at the time of cell phone unit use.

[0007]

[Example] Hereafter, one example of this invention is explained, referring to a drawing.

[0008] The cell phone unit concerning this example consists of the transceiver section 2 it can detach [section] to the main part 1 of a portable telephone, and this main part 1 of a portable telephone.

[0009] Said main part 1 of a portable telephone can possess the display 3 which consists of liquid crystal etc., the control unit 4 in which key ** was arranged in the shape of a matrix, a loudspeaker 5, a microphone 6, and the battery 7 that can be charged, and can detach and attach this battery 7.

[0010] A crevice 8 is formed in the center of abbreviation of said main part 1 of a portable telephone, and said display 3 pushes out in the upper part of this crevice 8 in the shape of eaves, and is formed in it. Moreover, the contact 9 (refer to drawing 2) is formed in the wall surface by the side of said control unit 4 which attends a crevice 8.

[0011] Said transceiver section 2 can be made to be able to slide to the crevice of said main part 1 of a

portable telephone from the side, and can be fitted in, and the upper part of this transceiver section 2 is making the configuration with a stage said display 3 and the appearance in which it does not interfere. Moreover, said contact 9 and the contact 10 which contacts are formed in the side of the opposite side of the configuration with a stage of the transceiver section 2 in the state of fit-in.

[0012] The built-in receiving antenna 11, the built-in transmitting antenna 12, and said built-in receiving antenna 11 are connected to a controller 14 through the receiving means 13, and said built-in transmitting antenna 12 is connected to said controller 14 for said transceiver section 2 through the transmitting means 15.

[0013] Moreover, electric power is supplied to power required to connect the storage machine 16 and the tremulor 17 to said controller 14, and operate said receiving means 13, a controller 14, the transmitting means 15, the storage machine 16, and the tremulor 17 by the battery 18.

[0014] Hereafter, actuation is explained.

[0015] A message becomes possible where the transceiver section 2 is fitted in said main part 1 of a portable telephone.

[0016] Next, at the time of carrying, said transceiver section 2 is demounted from the main part 1 of a portable telephone, and the main part 1 of a portable telephone is contained in a bag etc., and stores and carries only said transceiver section 2 in the pocket of clothes etc.

[0017] When there is a call to a cell phone unit, said receiving means 13 receives arrival of the mail through said built-in receiving antenna 11, and said transceiver section 2 is inputted into the account controller 14 of back to front with which necessary signal processing, such as amplification and A/D conversion, was performed. When said controller 14 checks arrival of the mail, while making said storage machine 16 carry out the input storage of the contents of arrival of the mail, said tremulor 17 is driven. This tremulor 17 vibrates and a pocket person recognizes that there was arrival of the mail.

[0018] Drawing and this main part 1 of a portable telephone are equipped with the transceiver section 2 for the main part 1 of a portable telephone. Said contact 10 and said contact 9 contact by wearing of the transceiver section 2, and the circuit by the side of the transceiver section 2 and the circuit by the side of the main part 1 of a portable telephone are connected. The contents of arrival of the mail are called in from said storage machine 16, and the contents of arrival of the mail are displayed on said display 3 through said controller 14. *(ing), a pocket person can check the contents of arrival of the mail, does operating ** of message initiation etc., and starts a message.

[0019] At the time of transmission, said main part 1 of a portable telephone is equipped with said transceiver section 2. The alerting signal from a control unit 4 can be inputted into said controller 14 by equipping said main part 1 of a portable telephone with said transceiver section 2, and this controller 14 is changed into a sending signal through said transmitting means 15, and is transmitted from said built-in transmitting antenna 12. Input is displayed on said display 3, checks input according to the contents of a display, and starts a message.

[0020] If a message is completed, the transceiver section 2 will be pulled out and the main part 1 of a portable telephone will be contained in a bag etc.

[0021] It is not necessary to contain the main part 1 of a portable telephone in a pocket etc., and it **, and in this example, in order to secure operability, it becomes possible to enlarge.

[0022] In addition, although the transceiver section 2 is made to slide from a longitudinal direction and it equipped with it in the above-mentioned example, it is good also as an insertion mold, and although the tremulor 17 was formed as an arrival-of-the-mail means of communication which makes a pocket person recognize arrival of the mail, it may replace with this tremulor 17, or it may combine, and a sound producing device may be formed. Furthermore, as for the ability of modification to be variously added in the range which does not deviate from the summary of this invention, it is needless to say that a display 3 may be formed in the transceiver section 2, or a loudspeaker 5 or a microphone 6 may be formed in the transceiver section 2 etc.

[0023]

[Effect of the Invention] As stated above, according to this invention, it is portable, and while it is possible to miniaturize a pocket portion further, the outstanding effect of enabling improvement in

operability is demonstrated.

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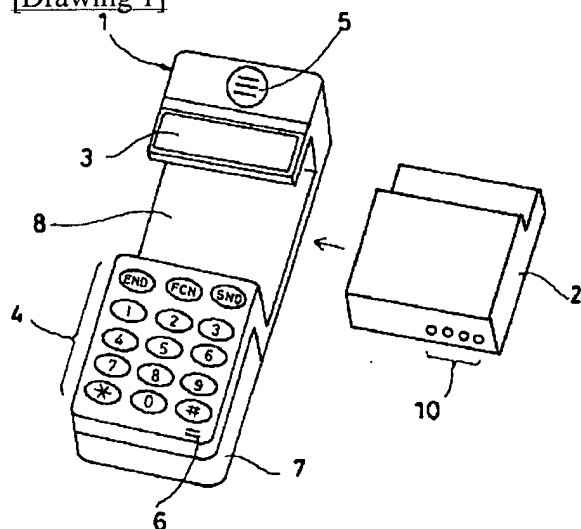
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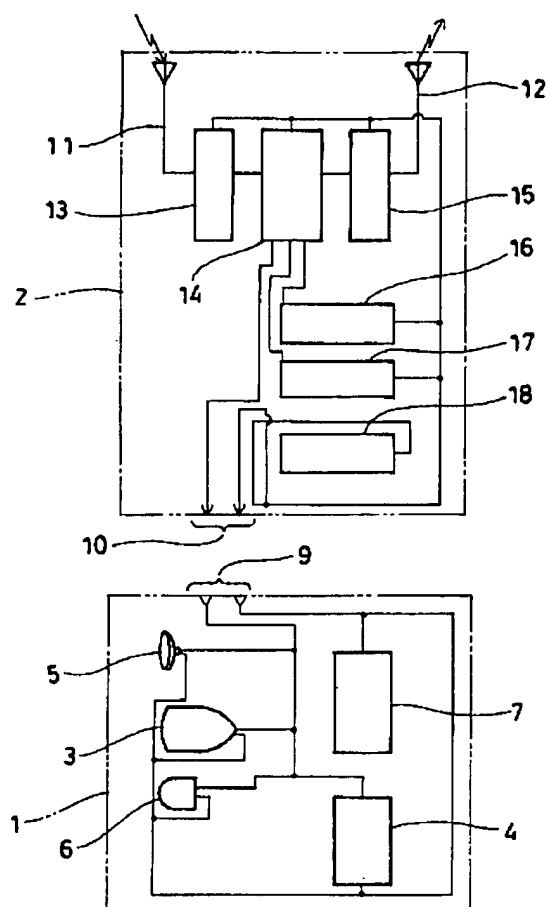
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DRAWINGS

[Drawing 1]



[Drawing 2]



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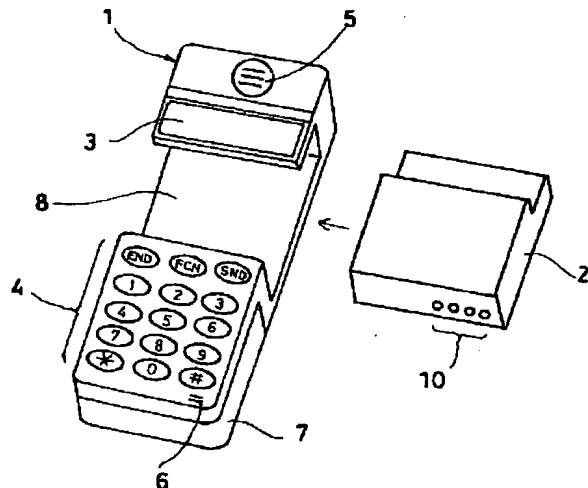
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(54)【発明の名称】 携帯電話装置

(57)【要約】

【目的】携帯電話装置の携帯性を損なうことなく操作性を向上させようとするものである。

【構成】少なくとも操作部4が設けられた携帯電話機本体1に、少なくとも着信伝達を具備する送受信部2を前記携帯電話機本体に嵌脱可能とし、携帯運搬時には送受信部を携帯電話機本体から取外し、送受信部は洋服のポケット等に収納し、携帯電話機本体はカバン等に収納して運搬し、着信があった場合は、送受信部が携帯者に着信を伝達し、携帯電話装置使用時には送受信部を携帯電話機本体に装着して使用する。



【特許請求の範囲】

【請求項 1】 少なくとも操作部が設けられた携帯電話機本体に、少なくとも着信伝達を具備する送受信部を前記携帯電話機本体に嵌脱可能としたことを特徴とする携帯電話装置。

【請求項 2】 着信伝達手段が振動発生器である請求項 1 の携帯電話装置。

【請求項 3】 携帯電話機本体に表示部を設けた請求項 1 の携帯電話装置。

【発明の詳細な説明】

【0001】

【産業上の利用分野】 本発明は、携帯電話装置に関するものである。

【0002】

【従来の技術】 近年では場所の制限なく、通話のできる携帯電話装置が普及しており、通話の便利性が向上するに従い携帯電話装置は更に携帯性が求められ、小型化が図られ、洋服のポケット等に入れて持運んでも、殆ど違和感がないまでになった。

【0003】

【発明が解決しようとする課題】 上記した様に従来の携帯電話装置では、携帯性を向上させる為、増々小型化が促進されているが、洋服のポケットに簡単に入れられる程度の大きさ迄小型化されると、電話番号等のキー入力スイッチもそれにつれ小さくなっており、操作性が大きく損なわれてきている。

【0004】 本発明は斯かる実情に鑑み、携帯性を損なうことなく操作性を向上させようとするものである。

【0005】

【課題を解決するための手段】 本発明は、少なくとも操作部が設けられた携帯電話機本体に、少なくとも着信伝達を具備する送受信部を前記携帯電話機本体に嵌脱可能としたことを特徴とするものである。

【0006】

【作用】 携帯運搬時には送受信部を携帯電話機本体から取外し、送受信部は洋服のポケット等に収納し、携帯電話機本体はカバン等に収納して運搬し、着信があった場合は、送受信部が携帯者に着信を伝達し、携帯電話装置使用時には送受信部を携帯電話機本体に装着して使用する。

【0007】

【実施例】 以下、図面を参照しつつ本発明の一実施例を説明する。

【0008】 本実施例に係る携帯電話装置は携帯電話機本体 1 と該携帯電話機本体 1 に対して嵌脱可能な送受信部 2 から成る。

【0009】 前記携帯電話機本体 1 は液晶等から成る表示部 3、キー釦がマトリックス状に配設された操作部 4、スピーカ 5、マイク 6、充電可能な蓄電池 7 を具備し、該蓄電池 7 は着脱が可能となっている。

【0010】 前記携帯電話機本体 1 の略中央には凹部 8 が形成され、前記表示部 3 は該凹部 8 の上部に底状に突出され形成されている。又凹部 8 に臨む前記操作部 4 側の壁面には接点 9 (図 2 参照) が設けられている。

【0011】 前記送受信部 2 は前記携帯電話機本体 1 の凹部に側方からスライドさせ嵌装可能であり、該送受信部 2 の上部は前記表示部 3 と干渉しない様に段付き形状をしている。又、送受信部 2 の段付き形状の反対側の側面には嵌装状態で前記接点 9 と接触する接点 10 を設ける。

【0012】 前記送受信部 2 は、内蔵受信アンテナ 11、内蔵送信アンテナ 12、前記内蔵受信アンテナ 11 は受信手段 13 を介して制御器 14 に接続され、又前記内蔵送信アンテナ 12 は送信手段 15 を介して前記制御器 14 に接続されている。

【0013】 又前記制御器 14 には記憶器 16、振動発生器 17 が接続され、前記受信手段 13、制御器 14、送信手段 15、記憶器 16、振動発生器 17 を作動させるに必要な電力は蓄電池 18 により給電される様になっている。

【0014】 以下、作動を説明する。

【0015】 送受信部 2 を前記携帯電話機本体 1 に嵌装した状態で通話可能となる。

【0016】 次に、携帯時には前記送受信部 2 を携帯電話機本体 1 から取外し、携帯電話機本体 1 は例えばカバン等に収納し、前記送受信部 2 のみを洋服のポケット等に収めて携帯する。

【0017】 携帯電話装置に対して呼出しがあった場合、前記送受信部 2 が着信を前記内蔵受信アンテナ 11 を介して前記受信手段 13 が受信し、増幅、A/D 変換等所要の信号処理が行われた後前記制御器 14 に入力される。前記制御器 14 が着信を確認すると着信内容を前記記憶器 16 に入力記憶させると共に前記振動発生器 17 を駆動する。該振動発生器 17 が振動して携帯者は着信があったことを認識する。

【0018】 携帯電話機本体 1 を取出し、該携帯電話機本体 1 に送受信部 2 を装着する。送受信部 2 の装着により前記接点 10 と前記接点 9 とが接触し、送受信部 2 側の回路と携帯電話機本体 1 側の回路が接続される。前記記憶器 16 より着信内容が呼び込まれ、前記制御器 14 を介して着信内容が前記表示部 3 に表示される。而して、携帯者は着信内容を確認することができ通話開始の釦を操作する等して通話を開始する。

【0019】 送信時には前記送受信部 2 を前記携帯電話機本体 1 に装着する。前記送受信部 2 を前記携帯電話機本体 1 に装着することで操作部 4 からの呼出し信号を前記制御器 14 に入力することができ、該制御器 14 は前記送信手段 15 を介して送信信号に変換し、前記内蔵送信アンテナ 12 より送信する。入力情報は前記表示部 3 に表示され、表示内容により入力情報を確認して通話を

開始する。

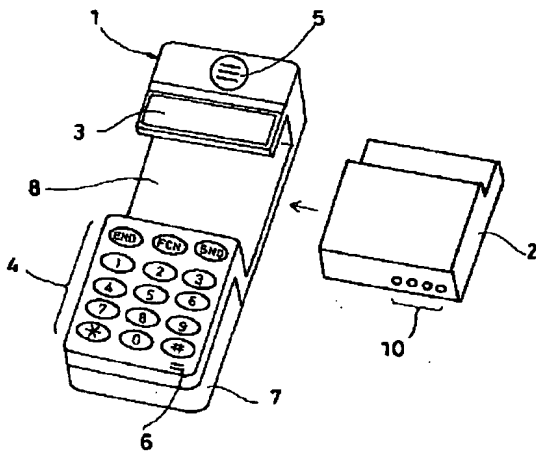
【0020】通話を完了すると、送受信部2を抜脱し、携帯電話機本体1をカバン等に収納する。

【0021】而して、本実施例では携帯電話機本体1はポケット等に収納する必要がなく、操作性を確保する為に大きくすることが可能となる。

【0022】尚、上記実施例に於いて送受信部2を横方向からスライドさせて装着する様にしたが、嵌込み型としてもよく、又着信を携帯者に認識させる着信伝達手段として振動発生器17を設けたが、該振動発生器17に代え或は併せて発音器を設けてもよい。更に、表示部3を送受信部2に設けてもよく、或はスピーカ5、マイク6のいずれか一方を送受信部2に設けてもよい等、本発明の要旨を逸脱しない範囲で種々変更を加え得ることは勿論である。

【0023】

【図1】



【発明の効果】以上述べた如く本発明によれば、携帯が可能であり、携帯部分を更に小型化することが可能であると共に操作性の向上を可能とするという優れた効果を発揮する。

【図面の簡単な説明】

【図1】本発明の一実施例を示す外観図である。

【図2】同前実施例に於ける機能ブロック図である。

【符号の説明】

- | | |
|---|---------|
| 1 | 携帯電話機本体 |
| 2 | 送受信部 |
| 3 | 表示部 |
| 4 | 操作部 |
| 5 | スピーカ |
| 6 | マイク |
| 7 | 蓄電池 |

【図2】

